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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/814,288

04/01/2004

Naoki Yoshida

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09/26/2006

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EXAMINER

HEWITT, JAMES M

ART UNIT

PAPER NUMBER

3679

DATE MAILED: 09/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/814,288	<b>Applicant(s)</b> YOSHIDA, NAOKI	
	<b>Examiner</b> James M. Hewitt	<b>Art Unit</b> 3679	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 July 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 11 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 4-10 and 12-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

The replacement drawing sheet received on 7/5/06 is acceptable.

### ***Specification***

The disclosure is objected to because of the following informalities:

On pages 12-13, it is unclear as to how a middle portion of the notched groove (53) can be said to comprise recess (55), and how a lower end of the notched groove (53) can be said to comprise recess (56)

Appropriate correction is required.

### ***Claim Objections***

Claims 1-17 and 19-20 are objected to because of the following informalities:

In claim 1, lines 6-7, the phrase "peripheral opposite" should be "opposite peripheral" for clarity.

In claim 2, line 3, the phrase "brought into" should be replaced with the phrase "still in" for clarity.

In claim 6, lines 1-3, the phrase "the inner peripheral edge of the socket comprises: a third stepped portion" should be replaced with the phrase "said second stepped portion being" for clarity and accuracy.

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In claim 6, lines 4-6, the phrase “and wherein...portions” should be deleted for clarity.

In claim 8, line 2, “a first” should be “the first”.

In claim 11, line 2, “each of” should be inserted after “portion of” for clarity.

In claim 12, line 2, “each of” should be inserted after “portion of” for clarity.

In claim 13, line 2, it is unclear as to which groove “the notched groove” refers, as there are a pair of notched grooves recited in claim 1.

In claim 13, it is unclear as to how a middle portion of the notched groove (53) can be said to comprise recess (55).

In claim 14, line 2, it is unclear as to which groove “the notched groove” refers, as there are a pair of notched grooves recited in claim 1.

In claim 14, it is unclear as to how a middle portion of the notched groove (53) can be said to comprise recess (55).

In claim 15, lines 1-2, it is unclear as to which groove “the notched groove” refers, as there are a pair of notched grooves recited in claim 1.

In claim 15, it is unclear as to how a lower end of the notched groove (53) can be said to comprise recess (56).

In claim 16, lines 1-2, it is unclear as to which groove “the notched groove” refers, as there are a pair of notched grooves recited in claim 1.

In claim 16, it is unclear as to how a middle portion of the notched groove (53) can be said to comprise recess (56).

In claim 19, line 4, the phrase “brought into” should be replaced with the phrase “still in” for clarity.

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In claim 20, line 3, the phrase "peripheral opposite" should be "opposite peripheral" for clarity.

In claim 20, line 18, the phrase "brought into" should be replaced with "in" for clarity.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 11 and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoskins et al (US 4,640,534).

With respect to claim 1, Hoskins et al disclose a socket (14) in a tubular shape for attaching to an end of one pipe (12); and a plug (13) in a tubular shape for attaching to an end of other pipe (11), wherein: the socket comprises a pair of notched grooves (72) at peripheral opposite sides, the notched grooves are mounted with a stopper (18) comprising a U-shape; the plug comprises a first taper portion (30), a flat portion (32) and a second taper portion (a portion of portion 34 adjacent cylindrical portion 36) extending respectively from a front end side and along an axial direction of the plug, a groove (38) for fitting the stopper being formed at a ridge portion of the second taper portion; and an inner

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periphery of the socket is arranged with a seal ring (16) for sealing between the inner periphery of the socket and an outer periphery of plug in an airtight connection and, *in a procedure of inserting the plug into the socket, after the seal ring reaches a radius portion (the transition between the first taper portion 30 and flat portion 32) on the plug between the flat portion and the first taper portion, the stopper is brought into contact with the second taper portion (see Fig. 6).*

Regarding the limitation “in a procedure of inserting...is brought into contact with the second taper portion”, the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this limitation has been afforded limited patentable weight.

With respect to claim 2, wherein before the seal ring passes the radius portion to ride on the flat portion, the stopper is constituted to be brought into contact with the second taper portion (see Fig. 6).

With respect to claim 11, wherein an upper half portion of the notched grooves at an outer peripheral edge of the socket comprises a pair of opposing ribs projecting from edge portions of the notched grooves, and wherein the pair of opposing ribs retains the stopper. Refer to Attachment A.

With respect to claim 17, wherein the stopper further comprises: a forward bent portion at a base portion of the stopper; and an arc-shaped inwardly bent portion proximate to the base portion of the stopper formed on an inner side of the stopper. Refer to Attachment A.

With respect to claim 18, Hoskins et al disclose a method of connecting a piping connector, said piping connector comprising a socket (14) containing a

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seal ring (16) fixably attached to an inner periphery of said socket, a stopper (18), and a plug (13) comprising a first tapered portion (30), a radius portion (the transition between the first taper portion 30 and flat portion 32), a flat portion (32), a second tapered portion (a portion of portion 34 adjacent cylindrical portion 36) and a notch portion (38) for engaging said stopper, all of said plug portions extending respectively from a front end of said plug, the method of connecting comprising: inserting said plug into said stopper; engaging said first tapered portion of said plug with said seal ring attached to said socket; and, sliding said plug into said stopper such that after said seal ring reaches the radius portion of said plug, the stopper is brought into engaging contact with the second taper portion.

With respect to claim 19, further comprising: sliding said plug into said stopper such that before said seal ring passes the radius portion, the stopper is brought into engaging contact with the second taper portion.

With respect to claim 20, Hoskins et al discloses a piping connector comprising: socket means (14) for attaching to an end of one pipe, said socket means comprising: groove means (72) at peripheral opposite sides of said socket means for retaining stopper means (18) mounted in said groove means, said stopper means for providing a locking connection relative to said socket means; and seal ring means (16) fixably mounted on an inner periphery of said socket for providing airtight sealing; and plug means (13) for attaching to an end of an other pipe, said plug means comprising: a first taper portion (30); a radius portion (the transition between the first taper portion 30 and flat portion 32); a flat

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portion (32); a second taper portion (a portion of portion 34 adjacent cylindrical portion 36); and groove portion (38) for engaging said stopper means; wherein all said portions extend respectively from a front end side and along an axial direction of said plug means, and wherein said plug means is insertable into said socket means such that after said seal ring means reaches said radius portion from said first taper portion and before said seal ring means reaches said fiat portion, said stopper means is brought into engaging contact with said second taper portion.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoskins et al (US 4,640,534).

It is unclear whether the radius of curvature of Hoskins et al's radius portion is in a range of 15 through 50mm. Nevertheless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hoskins et al's radius portion with a radius of curvature in the range of 15 through 50mm, since it has been held that where the general conditions of a



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claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

### ***Allowable Subject Matter***

Claims 4-10 and 12-16 are objected to (see ***Claim Objections*** above) but would be allowable if rewritten to overcome the above-noted objections.

### ***Response to Arguments***

Applicant's arguments filed 7/5/06 have been fully considered but they are not persuasive. Refer to the above rejections of claims 1-2, 11 and 17-20.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

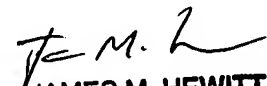
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Hewitt whose telephone number is 571-272-7084.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMH  
9/18/06

  
JAMES M. HEWITT  
PRIMARY EXAMINER

